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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,294	10/03/2003	Karl W. Gallis	02-212A (80633)	9648

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EXAMINER	
KRASS, FREDERICK F	
ART UNIT	**PAPER NUMBER**
1614	

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	**Application No.** 10/677,294	**Applicant(s)** GALLIS ET AL.	
	Examiner Frederick Krass	**Art Unit** 1614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 August 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

Previous Rejections

Unless specifically maintained infra, any previous rejection should be considered withdrawn.

Claim Informalities

Claim 15 continues to recite "wherein the silica" twice. Correction is required.

Obviousness Rejections

1) Claims 1-22 were rejected under 35 USC 103(a) as being unpatentable over WO 93/23007 ("Pryor").

This rejection is maintained.

2) Claims 1-22 were rejected under 35 USC 103(a) as being unpatentable over Dromard et al (USP 5,989,524) in view of WO 93/23007.

This rejection is maintained.

Discussion

Dr. Gallis states at page 2 of the Rule 132 declaration that:

> In an effort to investigate the effect of heat treatment (hereinafter referred to as 'calcination') on abrasive precipitated silica products, in accordance with the broad teachings of Pryor, I supervised the analysis of three different commercially available dental abrasive precipitated silica products. These were all available from J.M. Huber Corporation under the tradenames of ZEODENT® 115, 113 and 105. Measurements were made of these silica products as initially synthesized as well as after calcination at 750^0C for 2.5 hours. If Pryor's teachings were to hold true for precipitated silica products as well as for his exemplified silica gels, then the cumulative pore areas from pores in excess of 500 Angstroms ($m^{2/}g$) should theoretically decrease significantly, or, at least, to the same as now claimed within the patent claims of the pending application. Furthermore, as a result, the CPC Compatibility measurement of such calcined precipitated silica products should significantly increase as a consequence, too. The results obtained show no such significant change between the synthesized products and the calcined products.

He concludes at page 4 that:

> It was found that simply heating precipitated silica to elevated temperatures as not sufficient to significantly change the CPC compatibility of the synthesized product. The heating also had very little effect on the Cumulative Pore Area from Pores greater than 500A, as measured by mercury intrusion.
>
> Thus, in my opinion, the Pryor reference does not provide a teaching that is applicable to the modification of precipitated silica products through calcinations in terms of pore are and CPC Compatability.

The examiner has carefully considered the evidence presented in the declaration, but does not consider same probative at this time. Specifically, it is not clear that the three specific silicas used by Applicant are reasonably representative of "precipitated silicas" as a class.

Dromard et al teaches that silica in an aqueous suspension of pH lower than 6, *e.g.,* in concentrated salt (sodium sulfate) solution, has a high density of SiOH functional groups at its surface, while silica in aqueous suspension of pH of 6 to 8 does not. (See the passage bridging column 5, line 55 to column 6, line 10). Pryor teaches that chemical dehydroxylation may be used as well as thermal dehydroxylation and that, in general, chemical treatment is believed to provide better dehydroxylation of isolated surface hydroxyl groups. (Passage bridging bottom page 6 to top of page 7). Since the pH values of the silicas used in the declaration are not provided, it is not clear if chemical dehydroxylation would have been the route of choice for providing the instantly claimed cumulative pore and CPC Compatiblity values with those particular silicas used in the declaration, rather than thermal dehydroxylation.

Furthermore, Applicant's own data suggests that not all precipitated silicas behave equivalently. Specifically, the CPC compatability of Zeodent 113 decreases (0.32 to 0.09), while that of Zeodent 115 and 105 increases (the latter from 0.77 to 1.61). This non-conforming result tends to weaken the position taken by Dr. Gallis that his experimental results have broad applicability for all precipitated silicas.

2) Nonstatutory ("Obviousness-Type") Double Patenting Rejection

Claims 1-32 were rejected on the ground of nonstatutory obviousness-type double patenting over claims 1-33 of USP 6,946,119 in view of WO 93/23007.

This rejection is maintained.

Applicant asserts that a proper Terminal Disclaimer has been filed. (May 4, 2006 Remarks, p.9, last paragraph). Insofar as the examiner can determine, however, no such disclaimer is present in his electronic ("E-Dan") file.

Action is Final

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frederick Krass whose telephone number is (571) 272-0580. The examiner can normally be reached on Monday-Friday from 9:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel can be reached at (571) 272-0718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Frederick Krass
Primary Examiner
Art Unit 1614